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A seven man Educational Television Commission was responsible to the legislature for the operation of the system. The Commission's policy included employment of the finest teachers available for the essential basic subjects, encouragement of TV teachers to extend their scope of instructional knowledge and techniques, establishment of the closest possible relationship between TV and classroom teachers, and effective coordination on TV subjects with what was required basically by the colleges. Also included was availability of TV network time and facilities for teacher training programs, vocational education, colleges, driver training, and adult education, the use of video tape, and the development of an expert system of evaluating results. The procedure used by the TV teachers was: preparing the lesson before it was to be produced, mailing out the lesson plan to classroom teachers two weeks before the showing of the lesson, preparing visual aids, and having rehearsals the day of the lesson.							
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The South Carolina ETV Story

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THE COMMISSION

The following are members of the South Carolina Educational Television Commission by appointment of the Governor:

Chairman—R. M. JEFFERIES, JR., Barnwell

1st District—EDWARD KRONSBERG

2nd District—JOHN K. CAUTHEN

3rd District—J. WILLIAM BRADFORD

4th District—P. A. JOLLEY, SR.

5th District—CLARENCE MCFORD

6th District—A. L. CHANDLER

The following are ex-officio members:

HON. EDGAR A. BROWN, Chairman of the Senate Finance Committee.

HON. R. JAMES AYCOCK, Chairman of the House Ways and Means Committee.

HON. JAMES P. MOZINGO, III, Chairman of the Senate Education Committee.

HON. HAROLD D. BREAZEALE, Chairman of the House Education Committee.

HON. JESSE T. ANDERSON, State Superintendent of Education.

A REPORT ON THE Nation's First Statewide Closed Circuit Educational Television Network

SOUTH CAROLINA
EDUCATIONAL TELEVISION CENTER

2712 Millwood Avenue

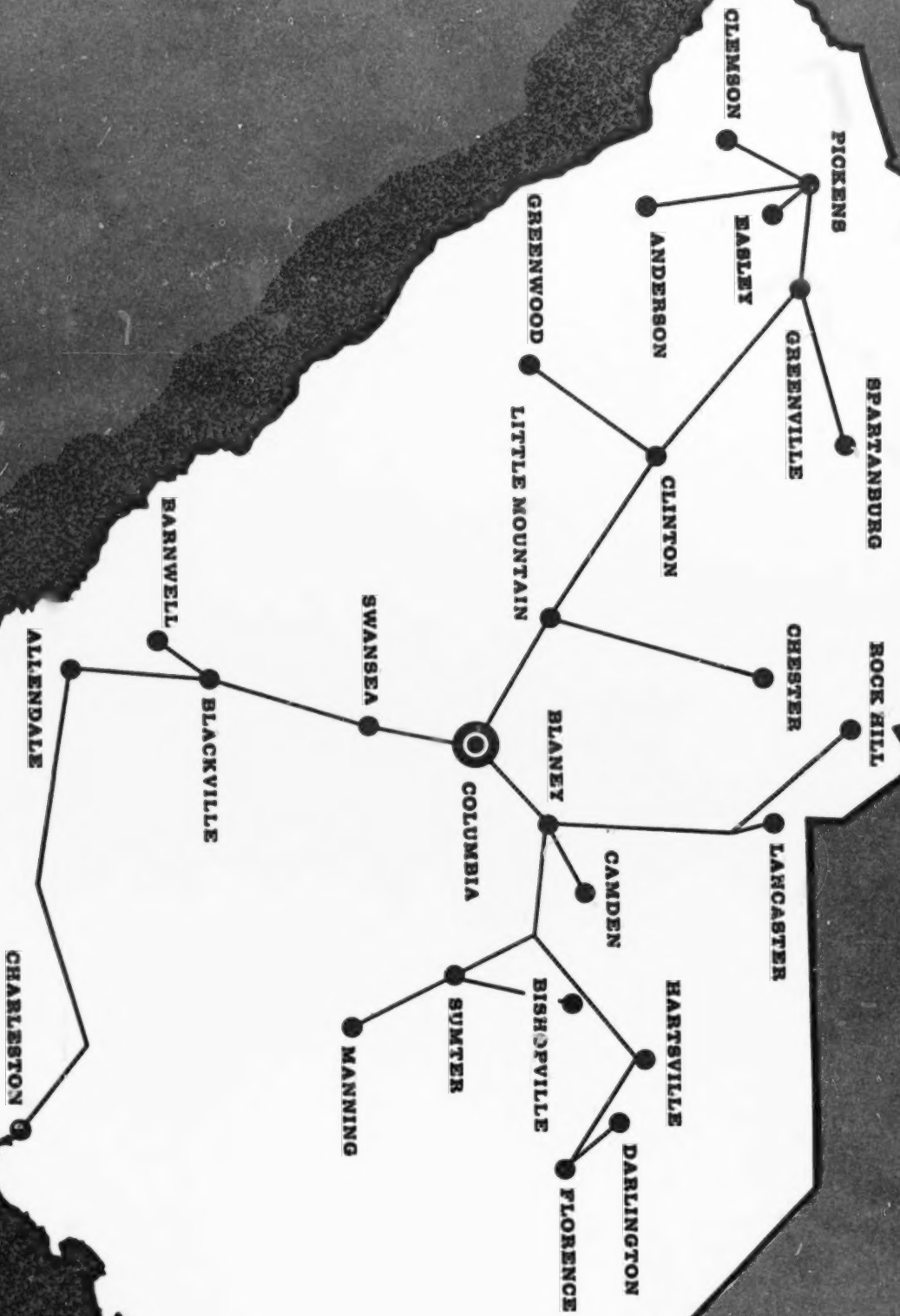
Columbia, South Carolina

R. LYNN KALMBACH, general manager

DR. GEORGE E. BAIR, education director

HENRY J. CAUTHEN, technical director

Statewide
Closed circuit
ETV Network



The South Carolina ETV Story

"Whether you all realize it or not, South Carolina has one of the most remarkable educational television programs in the country."

Thus spoke Dr. Alvin C. Eurich, director of the Ford Foundation's Fund for the Advancement of Education, before a gathering of the South Carolina legislature and 800 leading citizens and educators.

"The eyes of every other state are focused upon South Carolina," Dr. Eurich said. "Future generations will be ever grateful for your pioneering work in making the best teachers available to all children."

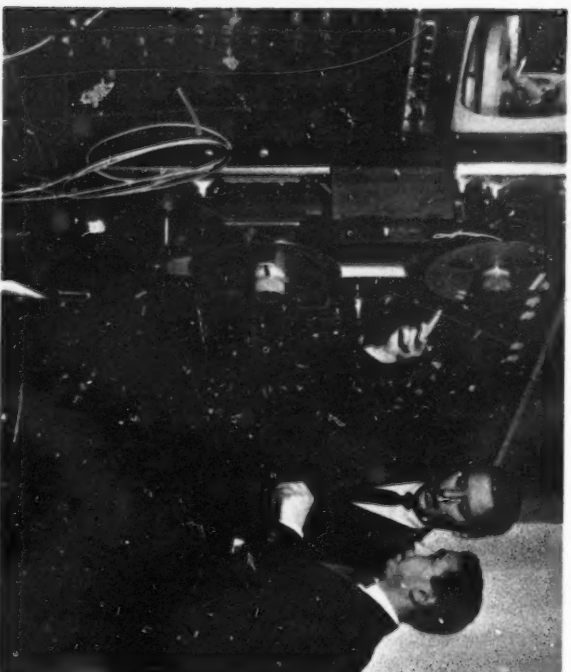
From a beginning in only one high school in September, 1958, closed circuit educational television in South Carolina now reaches out to 70 high schools in 21 of the state's 46 counties, including practically all of the major population centers as well as many rural and small town districts.





Dr. John J. Scanlon of New York, associate education editor of the Saturday Review, addresses ETV leaders of eastern half of U. S. at five-day seminar held in Columbia, sponsored jointly by R.C.A., University of South Carolina, and South Carolina ETV Center.

The South Carolina ETV Center at Columbia has become a mecca for educators and others from all parts of the United States who are interested in educational television. It was the site last July of an ETV seminar sponsored by the University of South Carolina and Radio Corporation of America for the eastern half of the United States. And recently, officials from Italy and Canada have made special trips to Columbia to study the South Carolina system.



Above (left) Sergio Era, Italian ETV researcher, who came to Columbia from Italy at suggestion of U. S. State Department, listens to video tape explanation by S. C. ETV Technical Director Henry J. Cauthen, and (above right) official Kentucky legislative-educational committee, led by House Speaker Harry K. Lowman, talks with Algebra Teacher Rhoda F. Lugenbeel.

Responsible to the legislature for the operation of the system is a seven man Educational Television Commission. Heading the staff at the Center is R. Lynn Kalmbach, General Manager, who came to the project after a distinguished career in education as a teacher and school administrator. Education Director is Dr. George E. Bair, formerly Professor of English and head of the Department of Secondary Education at Clemson College. Henry J. Cauthen, Technical Director, joined the project at its inception after five years in commercial TV production and direction.

The Commission evolved an eight-point policy statement in July, 1960. Although the South Carolina system has been closely scrutinized by educational and technical authorities from within the state and from other states, none of the basic policies or practices has had to be revised or significantly altered since the beginning. The eight policy points, with evidence of the efforts made to implement them, follow:

COMMISSION POLICIES

1. "Employment of the finest teachers available for essential basic subjects, including mathematics, sciences, languages, history, vocations and others. Thus, the best qualified teachers, whose talents in the past have been limited to a small number of pupils in a single classroom, will be able in the future, working as a team with classroom teachers, to project their knowledge and techniques to thousands of pupils, including those in the most remote rural schools."

South Carolina's ETV general staff (left to right) Henry J. Cauthen, technical director; Dr. George E. Bair, education director, and R. Lynn Kalmbach, general manager.





MRS. RHODA F. LUGENBEEL, Algebra



MRS. CORNELIA C. TURNBULL, Geometry



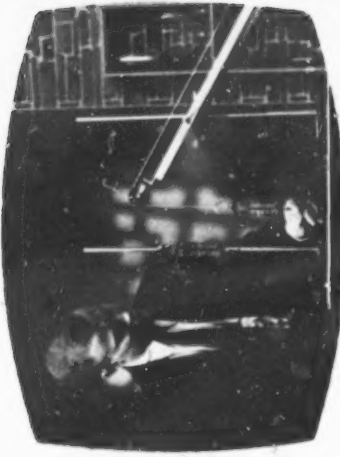
MRS. RUTH D. THOMAS, History

All teachers chosen for TV were experienced and respected classroom teachers of proven ability. The South Carolina ETV Center is placing almost total emphasis on basic, difficult-to-teach subjects, thus seeking to help solve the crucial shortage of qualified teachers.

Subjects presently taught daily are First Year Algebra, Second Year Algebra, College Algebra, Plane Geometry, French for Beginners, Ninth Grade Science and South Carolina History. Afternoon teacher-training courses are offered in mathematics and audio visual aids. In addition, there is a night course in basic electronics that has attracted over 1,500 students, including adults and teenagers. This initial venture into industrial and vocational training received an unexpectedly enthusiastic reception.

2. "Encouragement of TV teachers, who will be responsible for only one lesson a day, to extend their scope of instructional knowledge and techniques, thereby keeping abreast of the rapidly changing world in which we live."

Working with a director, a research assistant and with the art and production departments, each teacher spends between six and eight hours in planning, developing, and taping each 25 to 28 minute lesson. To assist further, the Center is accumulating library materials on TV teaching, subject matter, and teaching techniques to make them readily available to the teachers. For the most part, teachers are full-time employees of the Center for 11 months while developing a nine-months' course.



MARVIN H. O'NEAL, Science



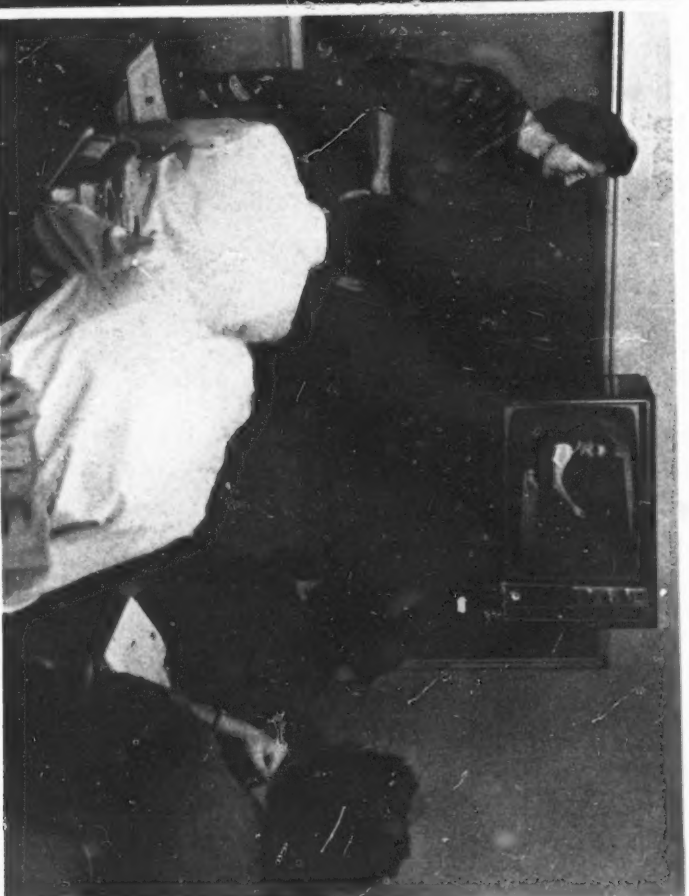
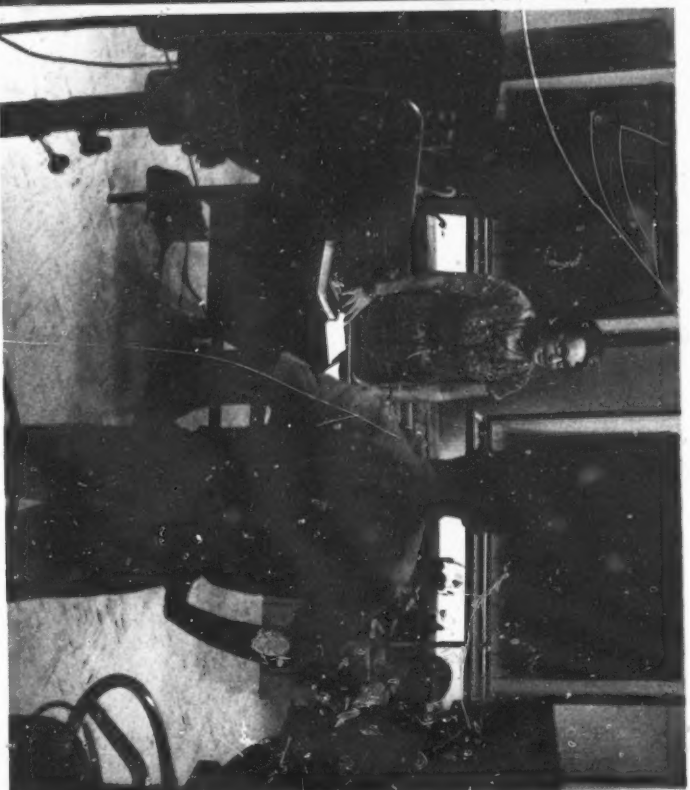
MADAME LUCY TURNEY-HIGH, French



MACKEY QUAVE, Electronics

3. "The closest possible relationship between TV and classroom teachers will be stressed. There will be a classroom teacher in every class. Supplied several days in advance with script outlines of the TV teachers' subject matter, the classroom teachers will have the opportunity and responsibility of coordinating and elaborating in the follow-up period on each subject, answering questions, observing discipline, counseling, testing and otherwise maintaining the vital teacher-pupil relationship which now prevails."

Close relationship is maintained between TV and classroom teachers through workshops and regular reports from the classroom to the TV teacher. The TV teacher prepares daily lesson plans, including a statement of what will be taught each day and suggestions for follow-up and assignments. These are mailed to classroom teachers two weeks in advance of the TV presentation. The education staff, including the teachers, make periodic visits to receiving schools.



At summer workshops cooperating classroom teachers help in planning courses and teaching techniques. They even get the feel of TV teaching by appearing on camera themselves. This prepares TV and classroom

teachers for the time when they will work together as a team, bringing two teachers to every classroom instead of only one.

4. "Establishment of effective coordination on TV subjects with what is required basically by the colleges, making it possible for more high school graduates to qualify satisfactorily for admission to college under the progressively high college entrance standards and to pursue their college work without the problem of remedial courses."

A college preparatory level has been recommended by the ETV Center's Educational Advisory Committee, composed of teachers and administrators. In implementing this decision, the staff has discovered that the need for remedial courses can be eliminated. In fact, some students who have completed South Carolina's ETV courses in mathematics and French have been exempted from freshman courses in these subjects because of the quality of their preparation.

Parents, teachers and pupils alike, however, must understand that no single level of instruction can enable all students to get passing grades and still fully qualify them for college.

5. "Make available to the leadership of the State Department of Education TV network time and facilities for teacher training programs which may be deemed desirable."

During the 1961-62 session the Center, at the request of the State Department of Education, transmitted a course in Audio-Visual Aids, produced by the University of Wisconsin, and another in Improving Understanding of Mathematics, produced at Texas University. These were offered in after-school hours, and teachers could receive credit for them from various colleges in the state.

6. "Make possible exploration and research through TV in the areas of vocational education, colleges, junior colleges, driver training, adult education and other uses."

For adult education, in addition to the basic electronics course mentioned previously, the ETV Center, working with Clemson College, video tapes agricultural training programs for presentation over commercial TV stations.

The American Association of Agricultural Editors voted one of these programs the top national award for agricultural communications.

Clemson also uses the state's closed circuit network for state-wide agricultural training, with adults going to their local school at night to view the programs broadcast through the state network. Local coordination is handled by the county farm agents.

Various other state institutions and agencies are planning statewide use of the network in connection with civil defense, law enforcement, highway safety, mental health and military training.

Such afternoon and evening use entails no additional transmission cost since lines are open day and night year-round.





Through the medium of TV, Dr. Charles S. Davis, President of Winthrop College, the state's primary teacher-training institution, addressed large groups of alumnae gathered in schools for the nation's first statewide televised alumnae meeting (above).

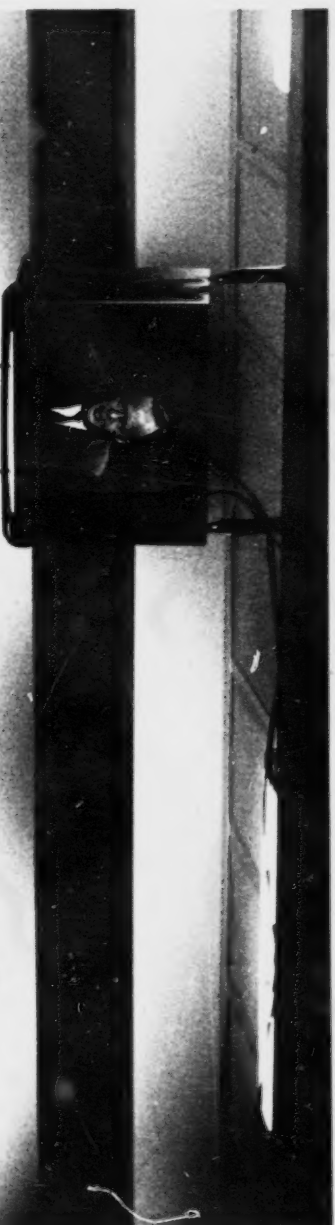
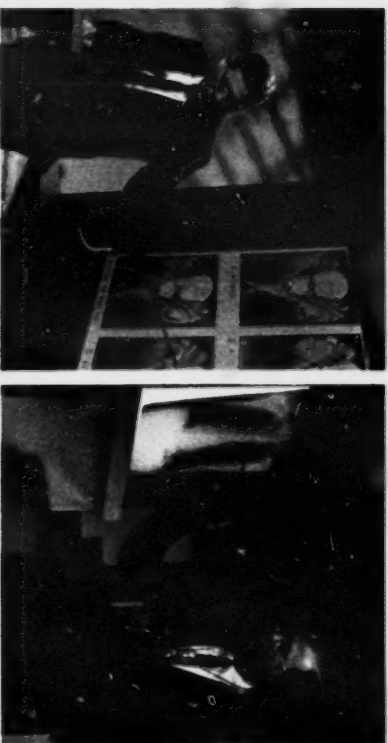
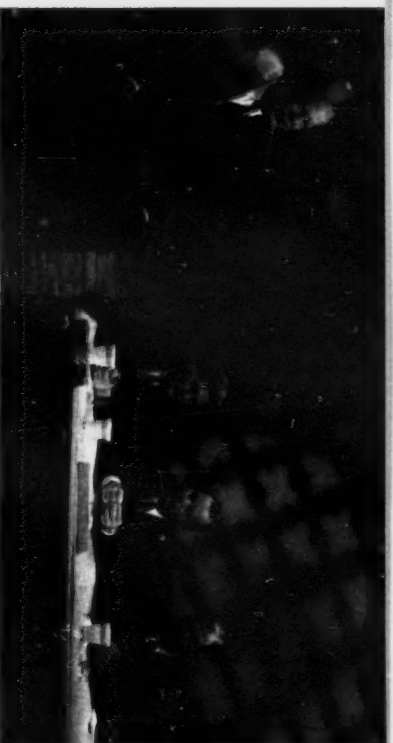
In a unique use of the network, South Carolina physicians, meeting in their hometown public schools, are receiving the nation's first statewide program of continuing medical education (at right).

The symposia, aimed at keeping practicing physicians abreast of rapidly advancing developments in medicine, are presented by the Medical College of South Carolina.

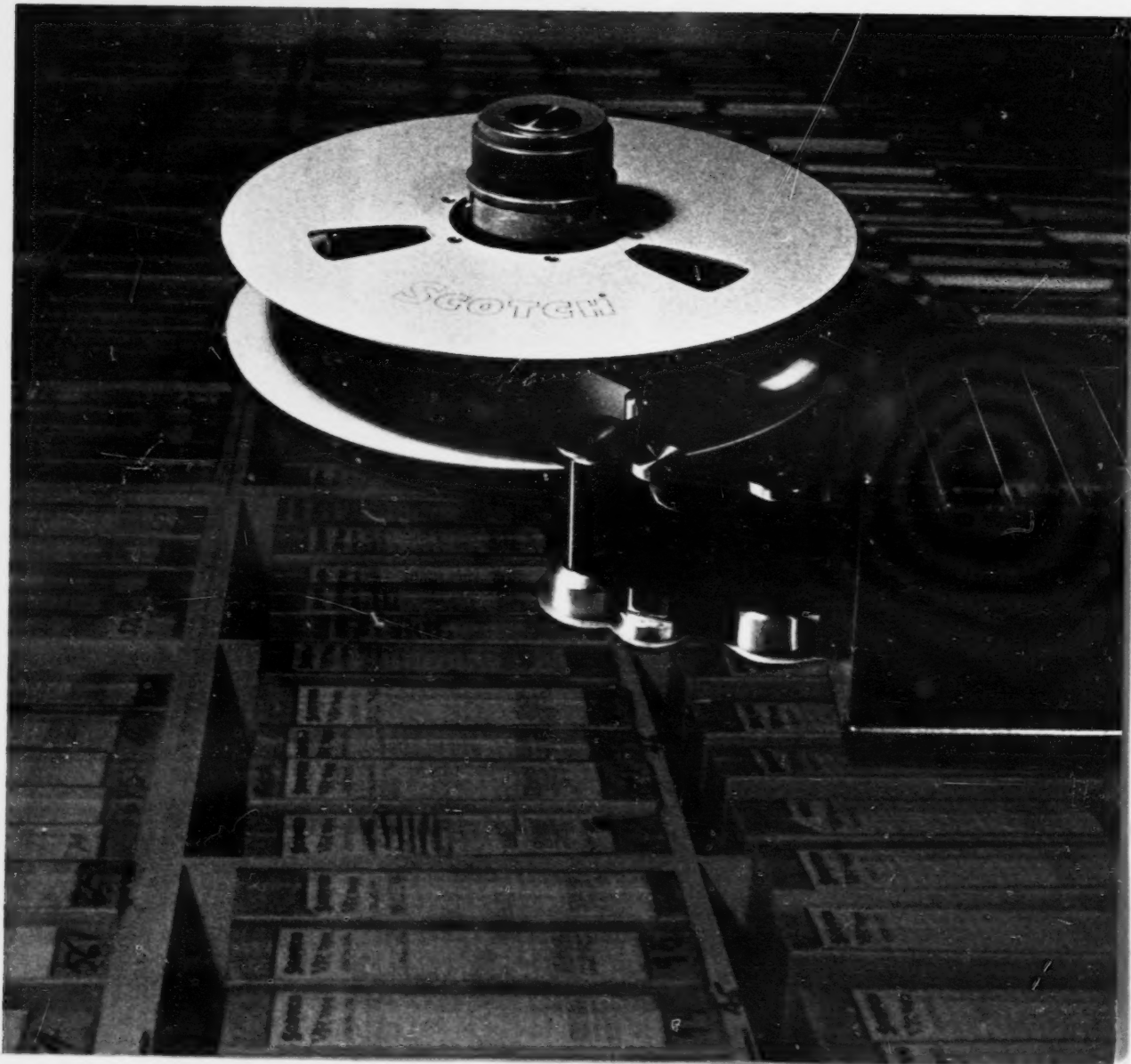
Each one-hour program is followed by a 30-minute question and answer period during which viewing doctors can ask questions of the faculty panel at the ETV Center through a special direct-line phone system.

The American Academy of General Practice approved the TV symposia and granted 1½ hours credit for each program.

Through ETV the Medical College can now reach hundreds of physicians at one time.



7. "Utilization of video tape because of its instantaneous and long range versatility, with virtually unlimited possibilities of perfecting and preserving the best lessons and courses for future use."



Use of video tape demands of the teachers and directors that they do their utmost to prepare as perfect a lesson as possible. Furthermore, television provides practically unlimited possibilities for visual aids since they are preserved on tape. In addition to the visual aids prepared by the professional art and photographic department at the Center, movie films, animation, or still pictures of any subject, place or personality obtained from other sources can be inserted whenever and wherever desired. Microscopic and slow motion pictures also are readily adaptable.

Important and interesting personalities can be inserted for special purposes in regular lessons. For example, the New York Yankee baseball star, Bobby Richardson, participated in an algebra lesson demonstrating percentages. Doctors, architects, lawyers and other authorities have been included in lessons for illustrative purposes. Many new experiences, otherwise impossible, can be provided to stimulate the imagination of pupils.

Every regular and special educational lesson or course is saved for unlimited future use, but when a lesson or course is imperfect or out-of-date, it can either be revised or completely reproduced by the same or another teacher.

8. "Development of an expert system of evaluating results."

To aid the classroom teacher in the evaluation of her pupils, the teachers at the Center regularly provide test materials. In June, 1960, the Cooperative Test in Algebra I was administered by the Center to 1,600 students who had been taught with the aid of TV. Nearly 85 percent of those students scored above the national average. Median scores on the same test in Geometry were also above the national average.

South Carolina Points Way to Multi-Channel Transmission

One of South Carolina's major contributions to the development of ETV has been in the use of closed circuit distribution for wide geographic areas. Where closed circuit television has been used in other states, it has been largely within the confines of a single school or college. South Carolina advocates saw at once that the open circuit station may be forever limited to one channel, meaning that there could never be more than 12 half-hour subjects a day, or an average of only one subject for each class. Furthermore, only four open circuit educational stations had been allocated to the state by the FCC, with an effective geographical coverage of only a third of the state.

With these limitations in mind, South Carolina investigated the possibility of closed circuits through existing and planned facilities of the telephone companies. It was known only that closed circuit TV would allow as many channels with as many subjects as might be desired with excellent reception at every point.

The difficulty was that there were no closed circuit educational television networks in the nation, and no telephone company anywhere had cost figures for educational TV. In short, ETV advocates in South Carolina were seeking information that did not exist!

This problem, however, was to become an immediate challenge to Walter G. Edwards, general manager of Southern Bell Telephone Company in South Carolina, and other top men both in the Bell system and among the independent companies of the state. A force of engineering and cost experts was assigned to a concentrated study, working day and night for many weeks pioneering

in rates which had not been explored anywhere else in the world.

State Superintendent of Education Jesse T. Anderson and the late Dr. C. B. Seaborn of the State Education Department staff cooperated in the preparation of special maps of every county, precisely locating every public school in the state.

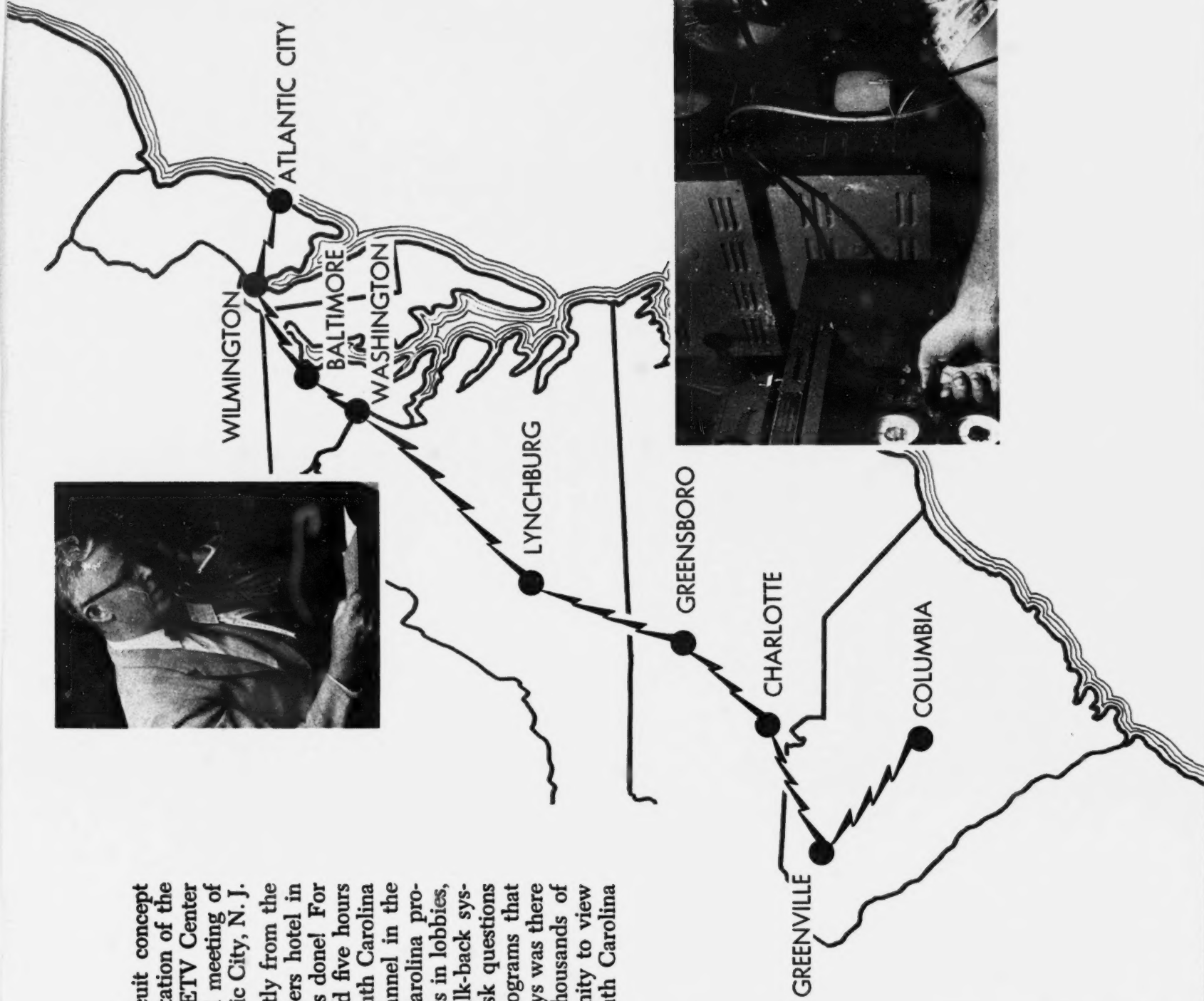
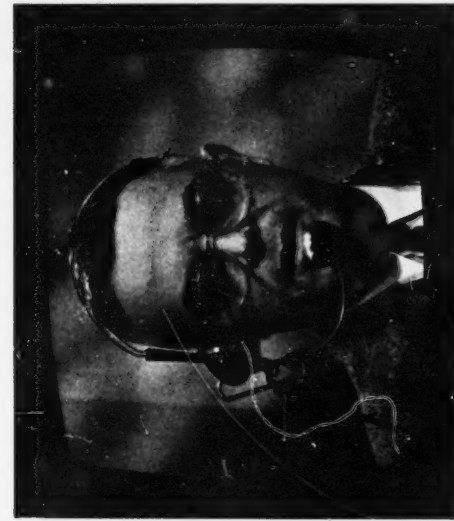
The result was that the legislature could be shown that every high school in the state, a total of 413, could be served with three channels of broadcasting, offering 36 daily half-hour subjects, at an average cost of \$12.67 per pupil a year. This cost also included the studios and transmission lines for the three summer months as well as afternoon and evening hours whenever needed year-round for a wide variety of educational services at all levels.

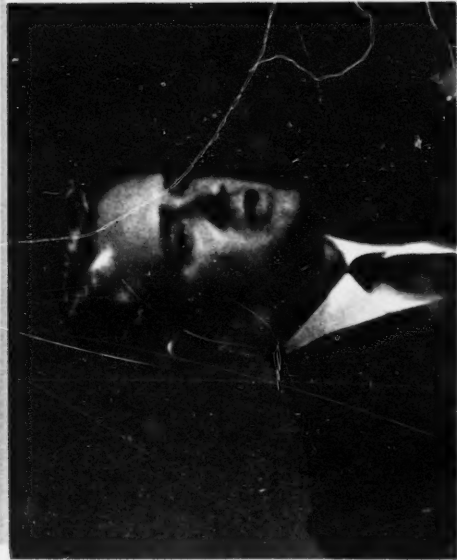
The legislature was so impressed that it appropriated all that was asked for the 1960-61 school year, when the South Carolina system went state-wide. The \$643,000 appropriation enabled the system to expand to 31 high schools in 11 counties using one channel via closed circuit. More than 60 schools volunteered to receive some of the subjects offered through cooperating commercial stations as a public service.

Thus began the first state-wide closed circuit system anywhere. In 1961-62, the legislature appropriated \$800,000, doubling the number of counties, schools and subjects offered. No funds other than state or county appropriations have been used in the South Carolina project.

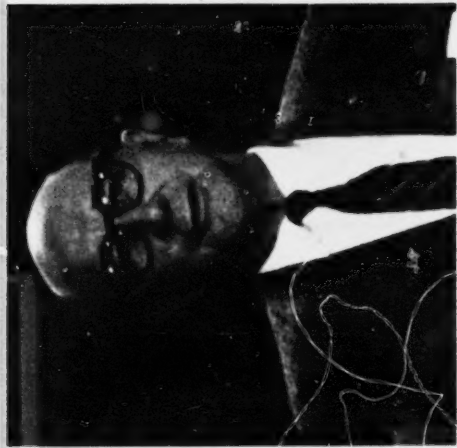
Recently, the South Carolina closed circuit concept was put to two long range tests. Upon invitation of the South Carolina Education Association, the ETV Center agreed to prepare an exhibit for the annual meeting of the National Education Association in Atlantic City, N. J.

The ETV staff decided to broadcast directly from the ETV Center in Columbia to the headquarters hotel in Atlantic City. It took some doing, but it was done! For five days, the closed circuit system delivered five hours a day of programs from Columbia to the South Carolina NEA booth, plus taking over a vacant channel in the hotel's TV system, permitting the South Carolina programs to go into all of the hotel receiving sets in lobbies, meeting rooms and bedrooms. A special talk-back system permitted viewers in Atlantic City to ask questions during the unique question and answer programs that were held daily. Not once during the five days was there the slightest interruption of service, and thousands of educators from every state had the opportunity to view ETV beamed with perfect clarity from South Carolina to New Jersey.





GOVERNOR ERNEST F. HOLLINGS



DR. JESSE T. ANDERSON
State Superintendent of Education



DR. ROBERT L. SUMWALT
President, University of South Carolina



DR. ROBERT C. EDWARDS
President, Clemson College



DR. CHARLES S. DAVIS
President, Winthrop College

Lately, Governor Ernest F. Hollings of South Carolina accepted an invitation from Governors Price Daniel of Texas and Buford Ellington of Tennessee for the South Carolina ETV Center to broadcast directly from Columbia into the hotel meeting room of the Southern Governors' Conference in Nashville, Tennessee. Again there was a flawless 30-minute broadcast outlining the South Carolina ETV concept for the 18 Southern governors and their staffs.

At this Governors' Conference, the receiving sets which had been installed for the South Carolina ETV broadcast also were to be used to tune in on a commercial station to bring to the governors a speech by President Kennedy before the United Nations. Shortly before the president's address was scheduled to start, the Nashville commercial station suffered a power failure. Governor Ellington consulted with the South Carolina representatives, and within five minutes the telephone company had switched the Kennedy speech into the South Carolina ETV system. Thus, it was broadcast.

South Carolina's ETV progress has been substantially helped by forthright expressions of approval from leading

educators in the state, including State Superintendent Anderson, President Robert L. Sumwalt of the University of South Carolina, President Robert C. Edwards of Clemson College, and others.

Governor Ernest F. Hollings, speaking before an audience of more than 900 educators, legislators, businessmen and farmers at the 1961 South Carolina Governors' Conference on Business, Industry, Education and Agriculture, said, "Across the nation, South Carolina ranks first in television education."

Visitors to the state have added their accolades. Dr. Eurich has commended the closed circuit, teamwork teaching, direct instructional and video-taped practices.

Dr. William L. Bowden of the Southern Regional Education Board, which works closely with the Southern Governors' Conference, spent two days in Columbia studying the South Carolina program.

"You have overwhelmed me," Dr. Bowden said. "A miracle has been performed in South Carolina. My whole concept of the use of television will have to be substantially changed."

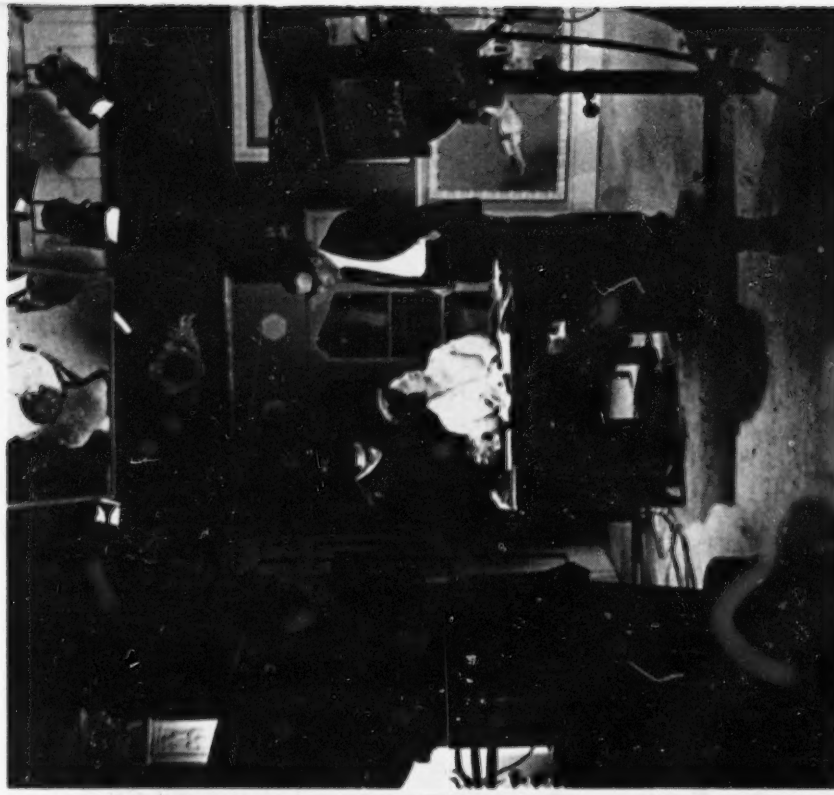
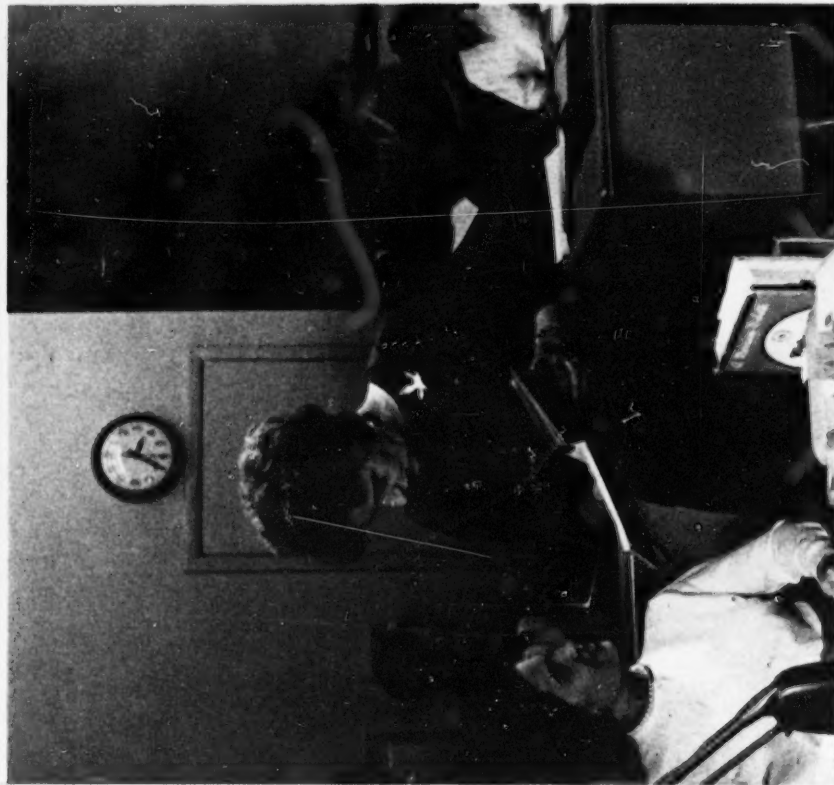
TV Teachers Aim For Quality . . .

PREPARATION . . . The preparation of a television lesson is a thorough operation. Weeks before the lesson is to be produced the teacher, through research, plans what material is to be presented.

LESSON PLANS . . . The completed lesson plans are turned over to the stenographic staff to be reproduced, assembled, and mailed out two weeks before the showing of the lesson through the network.

VISUAL AIDS . . . The teacher then talks with her director, deciding how the lesson is to be presented. They confer with the art director on the development of visual aids which are prepared in advance and checked for accuracy.

REHEARSAL . . . The day of the lesson has arrived. After the teacher and director talk over last minute details, the lesson is rehearsed.



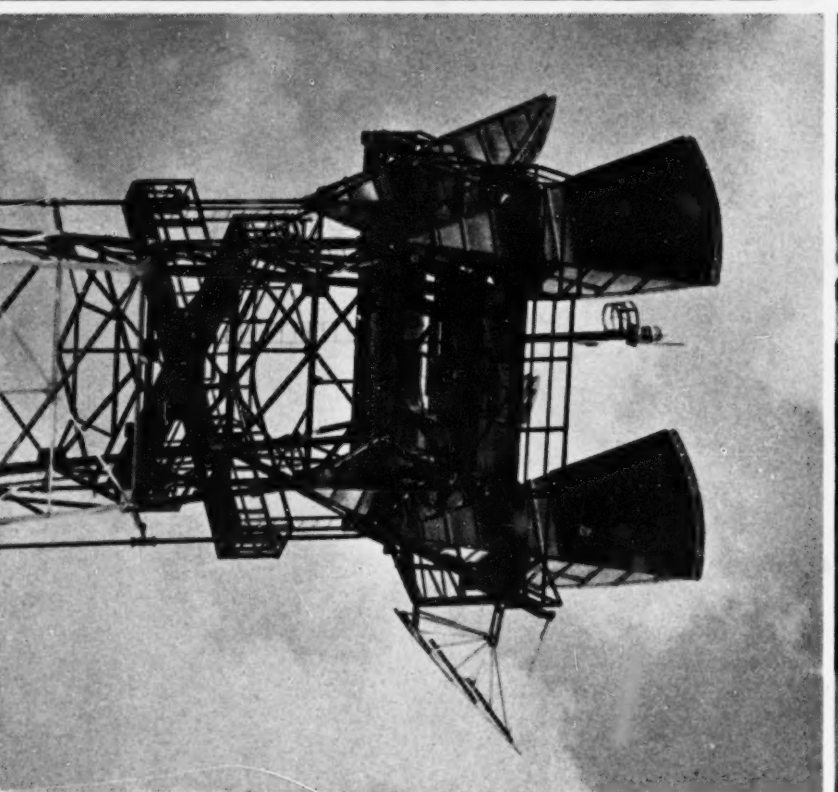
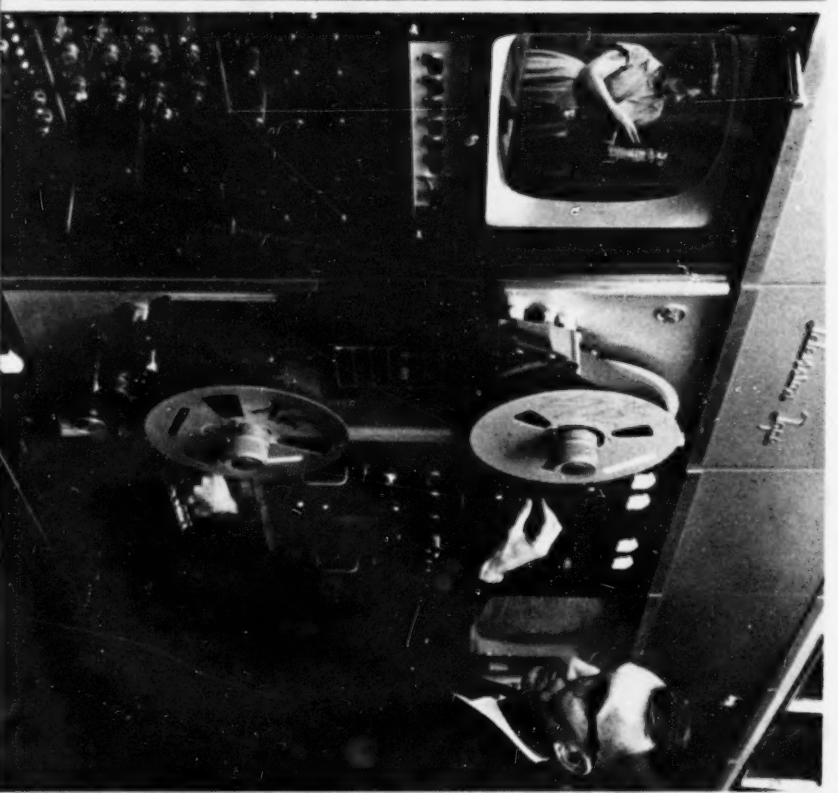
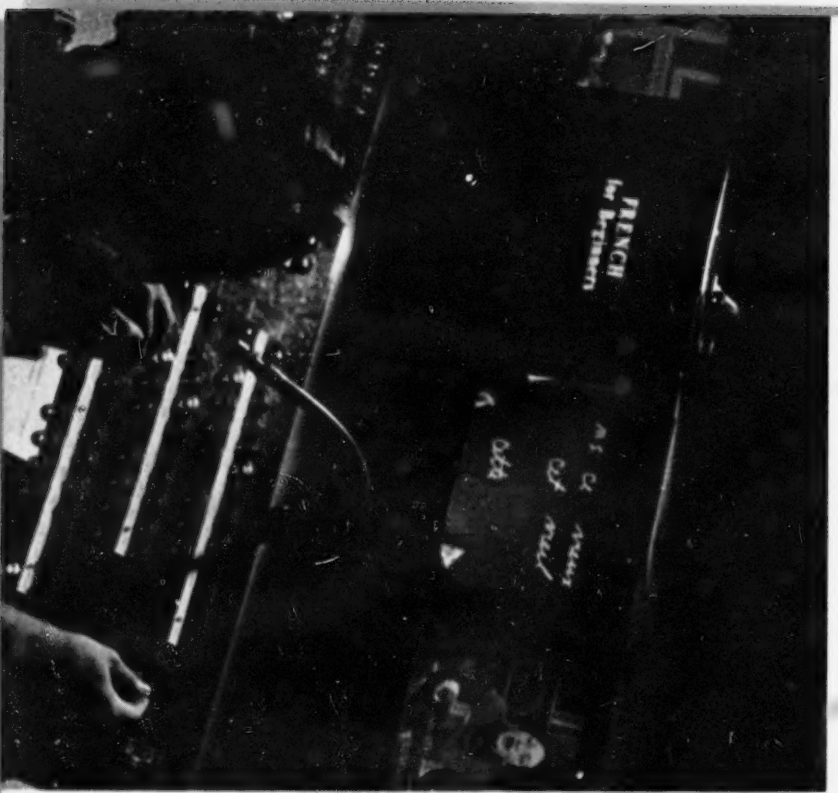
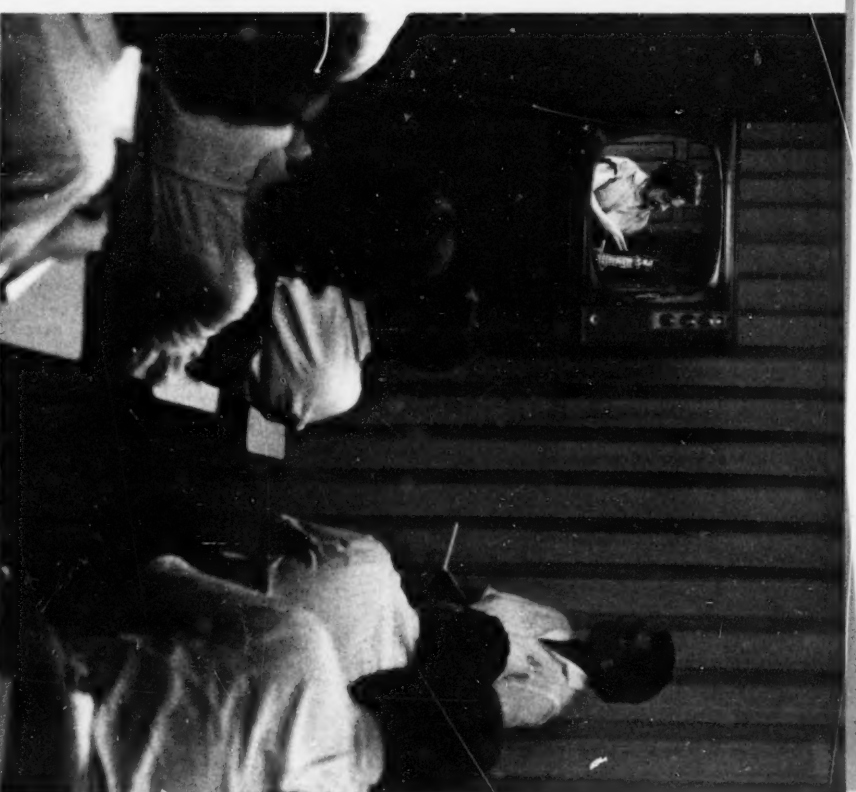
... Team With Classroom Teachers

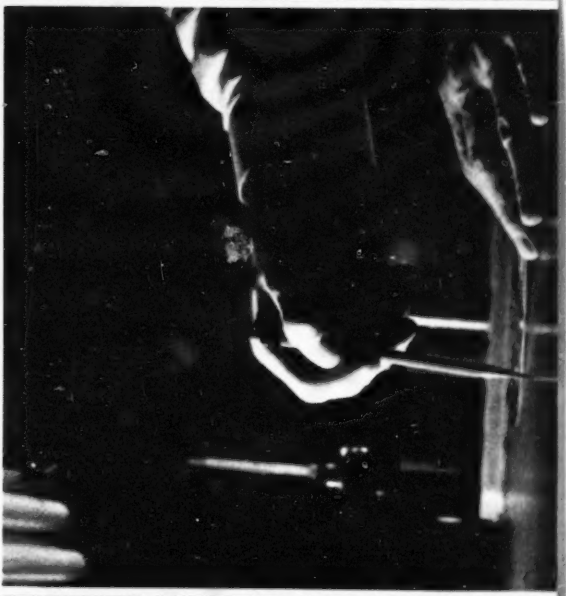
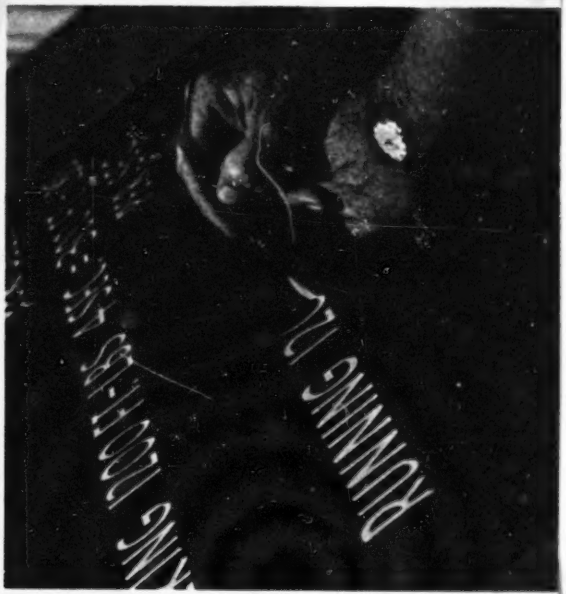
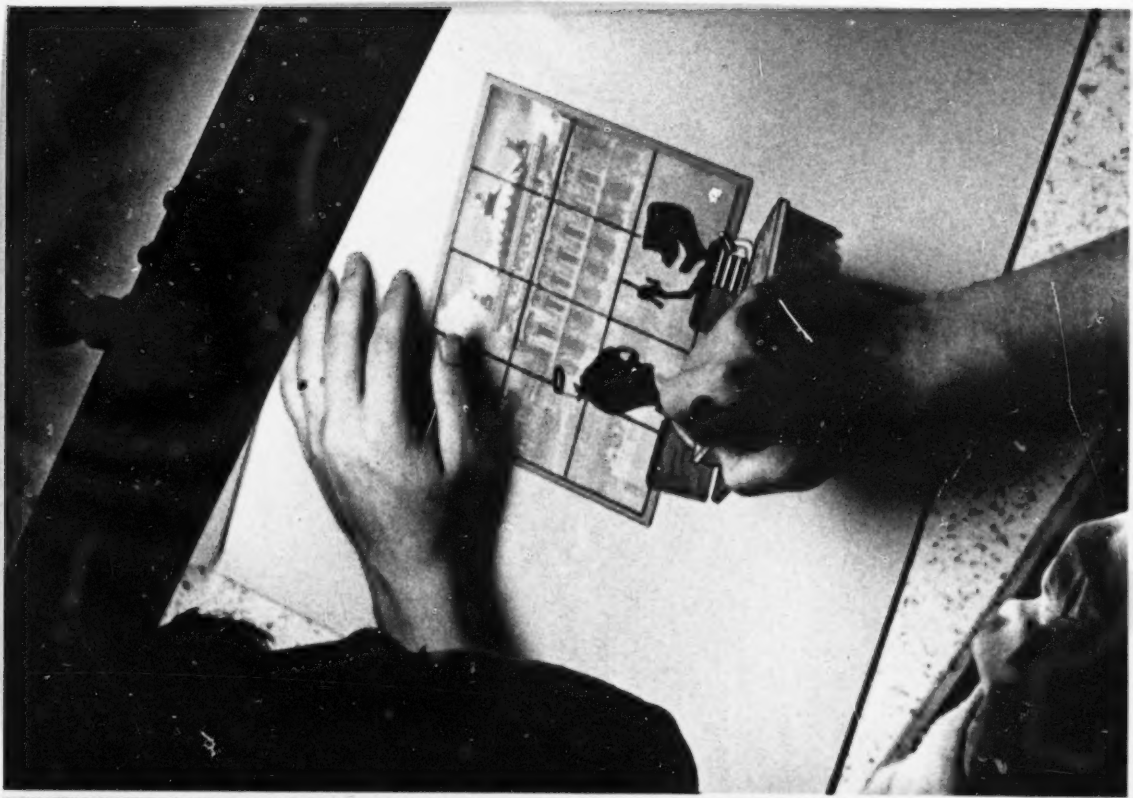
FINAL PRODUCTION . . . The video tape rolls, the teacher is cued, and the final production starts. The finished lesson is previewed by teacher and director and, if acceptable, stored until the lesson is transmitted to classrooms.

DAY OF LESSON . . . At the scheduled time, the video tape is removed from storage and put on the machine. With the touch of a button the machine is started, and the lesson sent to all parts of the state.

MICROWAVE AND COAXIAL CABLE . . . Full responsibility for transmission of lessons from the Center to the classrooms lies with telephone companies. The signal is carried by microwave to key locations in the state, then brought into the schools by coaxial cable.

TWO TEACHERS . . . The lesson reaches the classroom to be augmented by the classroom teacher who has available from the Center a lesson outline for her follow-up. In all, twenty-six people combine their talents for superior lessons.



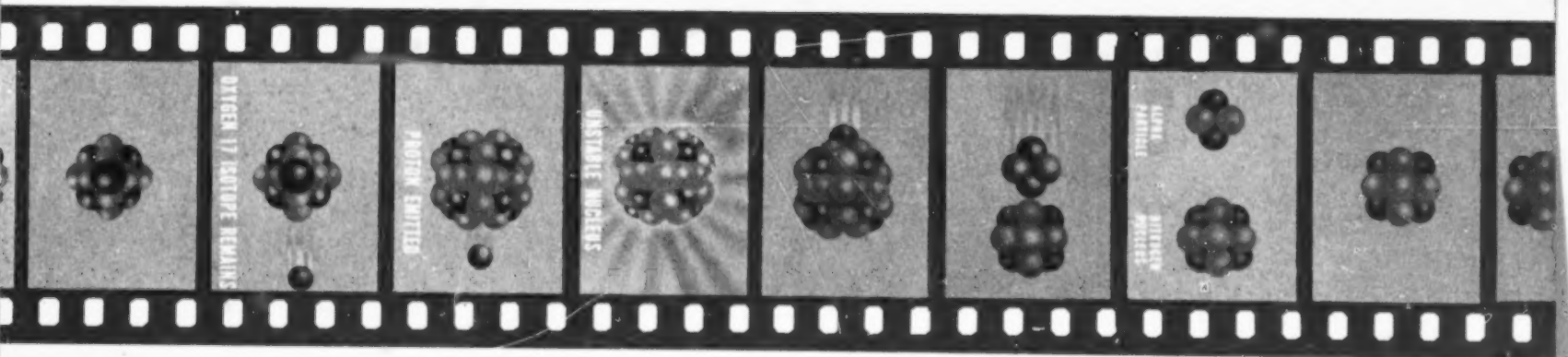


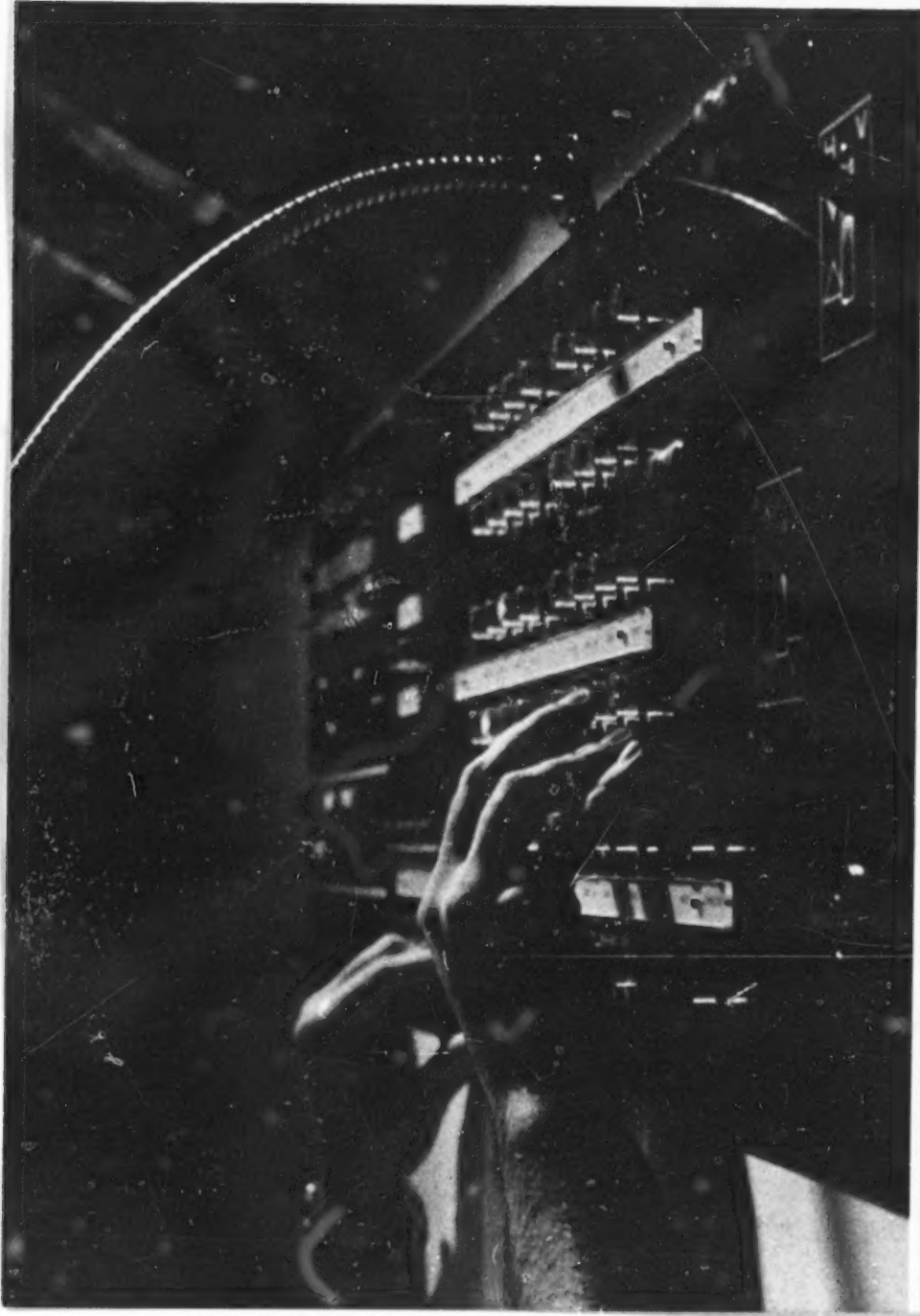
Professional Art Staff For Visuals

Expertly prepared visual aids are essential for maximum quality in producing a TV lesson. From the beginning in South Carolina, professional talents have been employed—illustrators, letterers, animaters, printers and photographers.

Often many hours are devoted to a single visual which may appear only momentarily on the screen, but since there is repeated use of lessons reaching so many pupils, the extra pains can be afforded.

Teachers, directors and the appropriate members of the art department confer frequently and at length to assure the most satisfactory visual aids.



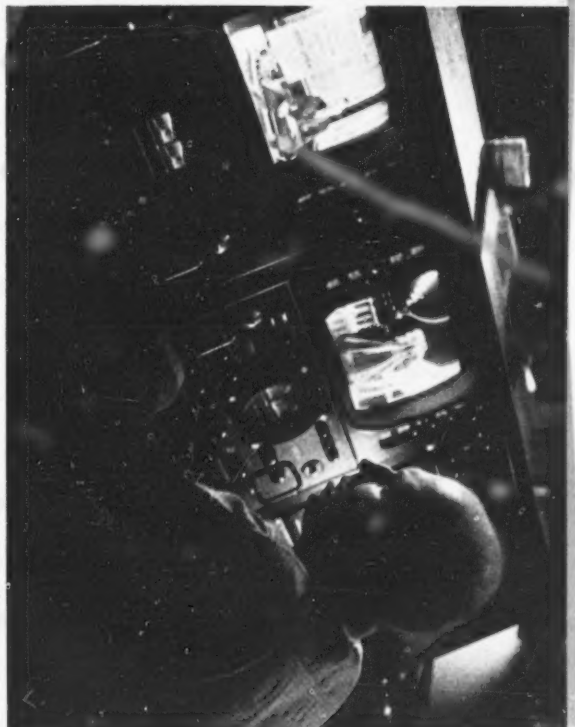
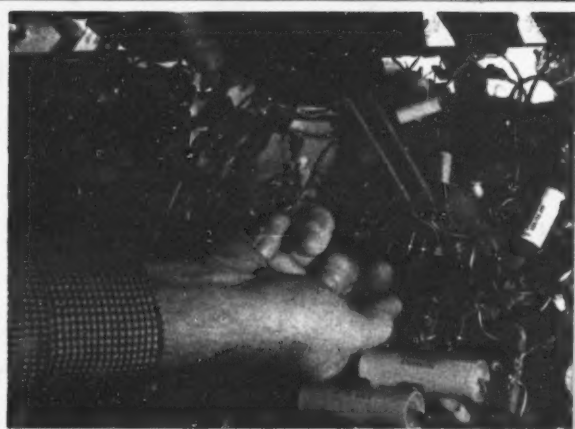
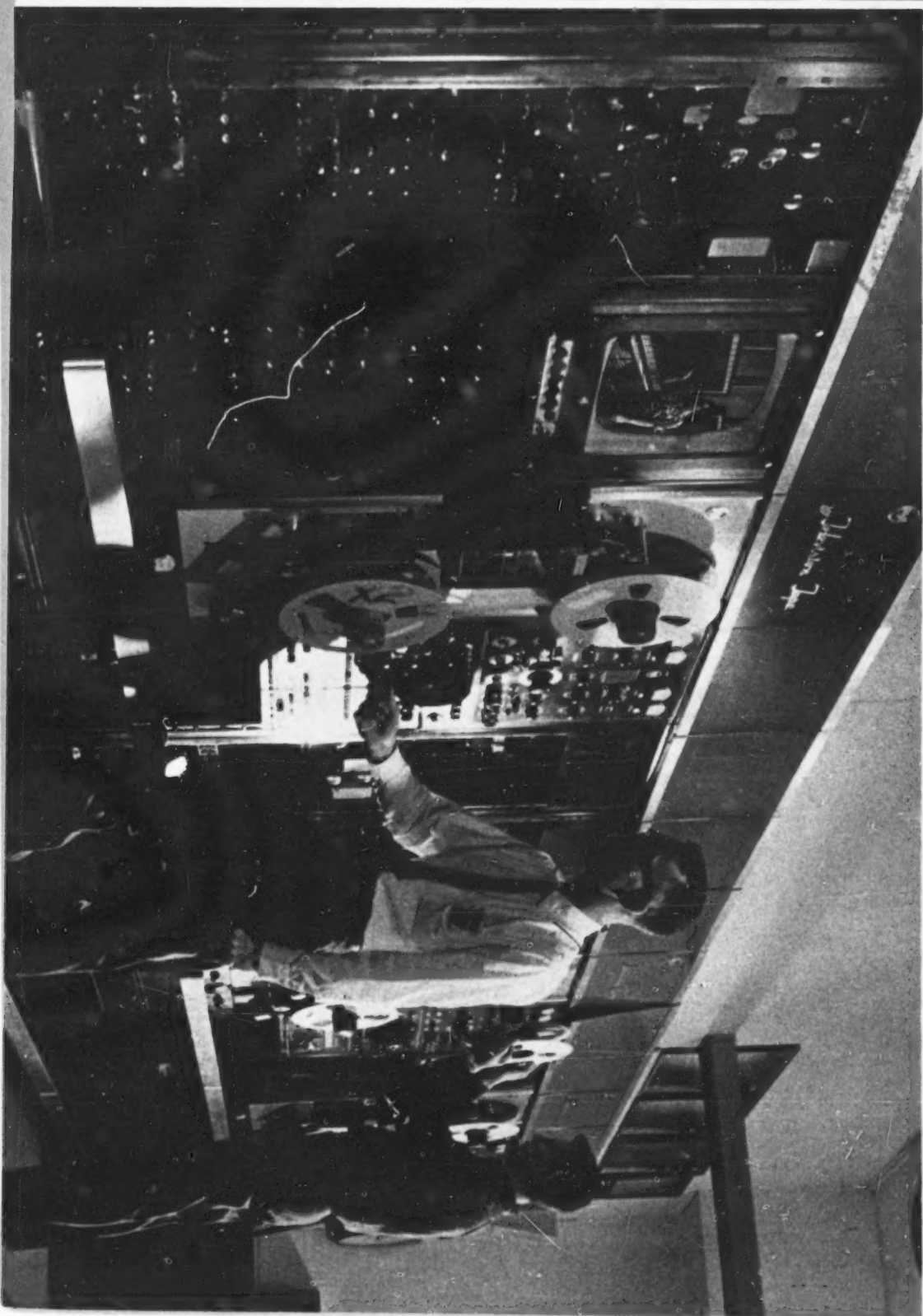
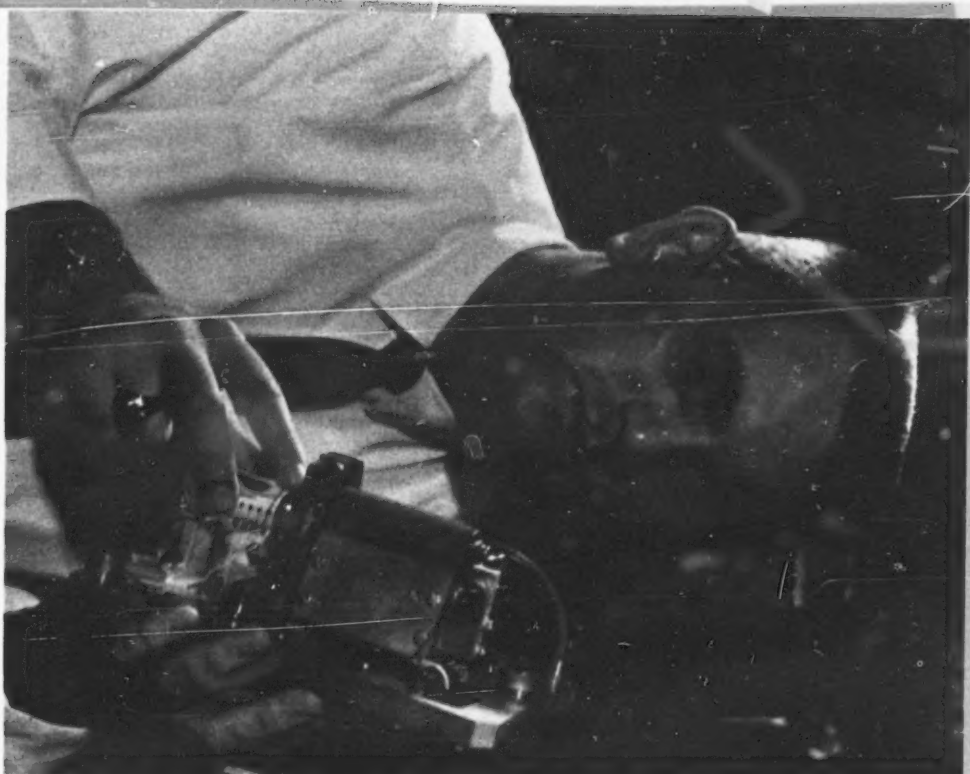


Skilled Technicians and Best Equipment

Just as the best teachers and illustrators are essential to the quality of a TV lesson, the technicians and equipment must be the finest available. Professional engineers, directors, lighting technicians and cameramen, using professional grade equipment, have brought a degree of excellence to the South Carolina program which otherwise would not have been possible.

Televised instruction reaches its full potential only when the emphasis is placed upon high quality in every phase.





Looking to the Future

In the beginning, the ETV Commission made this pledge:

"Major emphasis in the television system will be on higher quality education for more and more children throughout the State."

While responsibility for expansion of the existing ETV system in South Carolina rests with the legislature, planning at the Center for such expansion includes complete engineering to provide 36 subjects to all 413 high schools in the state, plus a variety of courses for 1,200 elementary schools.

The South Carolina ETV Commission has complete engineering and cost data for a system with virtually unlimited potential—already proven educationally, technically and financially feasible—to transmit the best teaching to all schools and colleges.

